

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Timothy O'Sullivan on 11/22/2004

The application has been amended as follows:

1. (Currently Amended) A method of managing a smart card product, comprising the steps of:

providing a plurality of generic definitions in a database, at least a portion of which have a predefined relationship to others of the generic definitions so as to provide a hierarchy of generic definitions;

selecting generic definitions from the plurality of generic definitions to associate the selected generic definitions with an instance of a card product definition, the instance of the card product definition defining characteristics of the smart card product; and

populating the selected generic definitions with data associated with the smart card product so as to provide a hierarchy of instances of the generic definitions which define the characteristics of the smart card product;

wherein one or more data processing systems is configured to utilize the hierarchy of instances of the generic definitions to manage the smart card product;

wherein the steps of providing a plurality of generic definition objects, selecting generic definition objects and linking the selected generic definitions comprise the steps of:

establishing the instance of the card product definition;

associating at least one chip definition with the instance of the card product definition;

associating at least one process definition with the instance of the card product definition;

associating at least one task definition with the at least one process definition;

associating at least one enterprise definition with the instance of the card product definition; and

associating at least one application definition with the instance of the card product definition.

2. (Original) A method according to Claim 1, further comprising the step of managing at least one of registration of card product holders, smart card product enablement, smart card product personalization, smart card product application data, smart card product hot lists and smart card product post-issuance application updates utilizing the hierarchy of instances of the generic definitions so as to provide the smart card product having the defined characteristics.

3. (Previously presented) A method according to Claim 2, further comprising the step of selectively linking at least two of the selected generic definitions to further define the hierarchy of instances of the generic definitions associated with the smart card product so as to further define the characteristics of the smart card product.

4. (Original) A method according to Claim 2, wherein the plurality of generic definitions include process definitions which define smart card management tasks which are configured to manage the attributes of the smart card product.

5. (Previously presented) A method according to Claim 2, wherein the plurality of generic definitions include a platform definition, a card product holder definition, a device definition, a certificate definition, or a key definition.

6. Cancelled.

7. (Previously presented) A method according to Claim 1, wherein the step of associating at least one process definition with the instance of the card product definition comprises the step of associating an enablement process definition, a registration process definition and a personalization process definition with the card product definition.

8. (Original) A method according to Claim 7, further comprising the step of associating at least one task definition with the enablement process definition so as to carry out the enablement process.

9. (Original) A method according to Claim 7, further comprising the step of associating at least one task definition with the registration process definition so as to carry out the registration process.

10. (Original) A method according to Claim 7, further comprising the step of associating at least one task definition with the personalization process definition so as to carry out the personalization process.

11. (Previously presented) A method according to Claim 1, wherein the step of associating at least one process definition with the instance of the card product definition comprises the step of associating a hot list definition with the instance of the card product definition.

12. (Original) A method according to Claim 11, further comprising the step of associating at least one task definition with the hot list process definition so as to carry out the hot list process.

13. (Previously presented) A method according to Claim 1, wherein the step of associating at least one process definition with the instance of the card product definition comprises the step of associating an application load definition with the instance of the card product definition.

14. (Original) A method according to Claim 13, further comprising the step of associating at least one task definition with the application load process definition so as to carry out the application process.

15. (Previously presented) A method according to Claim 1, further comprising the steps of:

associating an enterprise definition with the at least one process definition if the at least one process definition utilizes resources of an enterprise outside the domain of a smart card management server; and

associating a connection definition with the at least one process so as to define a mechanism for establishing a connection between the smart card management server and an enterprise associated with the enterprise definition associated with the at least one process definition.

16. (Currently Amended) A system for managing smart card products, comprising:

a database of smart card definitions, wherein the smart card definitions are associated in a hierarchical manner so as to encapsulate characteristics of smart card components, interrelationships with other components, and work processes; and

a smart card server operably associated with the database and configured so as to manage smart card products based on instances of the smart card definitions associated with the smart card products so as to define the characteristics of the smart card products and tasks associated with managing the smart card products; the smart card definitions associated with the smart card products including at least one chip definition, at least one process definition, at least one task definition, at least one application definition, at least one enterprise definition, and at least one connection definition; and

~~whrcin the smart card definitions include enterprise and connection definitions~~
and wherein the smart card server is further configured to utilize an instance of an enterprise definition and an instance of a connection definition to establish communications with an enterprise associated with the enterprise definition so as to allow the enterprise associated with the enterprise definition to carry out a task associated with managing the smart card products.

17. Cancelled.

18. (Original) A system according to Claim 16, further comprising an application manager server, wherein the application manager server is configured to manage applications loaded on a smart card product based on smart card definitions associated with the smart card product.

19. (Original) A system according to Claim 16, further comprising a certificate server configured to manage certificates utilized with a smart card product based on smart card definitions associated with the smart card product.

20. (Currently Amended) A system for managing a smart card product, comprising:

means for providing a plurality of generic definitions in a database, at least a portion of which have a predefined relationship to others of the generic definitions so as to provide a hierarchy of generic definitions;

means for selecting generic definitions from the plurality of generic definitions to associate the selected definitions with an instance of a card product definition, the instance of the card product definition defining characteristics of the smart card product; and

means for populating the selected generic definitions with data associated with the smart card product so as to provide a hierarchy of instances of the generic definitions which define the characteristics of the smart card product;

means for utilizing the hierarchy of instances of the generic definitions to manage the smart card product;

wherein the means for providing a plurality of generic definition objects, means for selecting generic definition objects and means for linking the selected generic definitions comprise:

means for establishing the instance of a card product definition;
means for associating at least one chip definition with the instance of the card product definition;
means for associating at least one process definition with the instance of the card product definition;
means for associating at least one task definition with the at least one process definition;
means for associating at least one enterprise definition with the instance of the card product definition; and
means for associating at least one application definition with the instance of the card product definition.

21. (Original) A system according to Claim 20, further comprising means for managing at least one of registration of card product holders, smart card product enablement, smart card product personalization, smart card product application data, smart card product hot lists and smart card product post-issuance application updates utilizing the hierarchy of instances of the generic definitions so as to provide the smart card product having the defined characteristics.

22. (Previously presented) A system according to Claim 21, further comprising means for selectively linking at least two of the selected generic definitions to further define the hierarchy of instances of the generic definitions associated with the smart card product so as to further define the characteristics of the smart card product.

23. (Original) A system according to Claim 21, wherein the plurality of generic definitions include process definitions which define smart card management tasks which are configured to manage the attributes of the smart card product.

24. (Previously presented) A system according to Claim 21, wherein the plurality of generic definitions include a platform definition, a card product holder definition, a device definition, a certificate definition or a key definition.

25. Cancelled.

26. (Previously presented) A system according to Claim 20, wherein the means for associating at least one process definition with the instance of the card product definition comprises means for associating an enablement process definition, a registration process definition and a personalization process definition with the card product definition.

27. (Original) A system according to Claim 26, further comprising means for associating at least one task definition with the enablement process definition so as to carry out the enablement process.

28. (Original) A system according to Claim 26, further comprising means for associating at least one task definition with the registration process definition so as to carry out the registration process.

29. (Original) A system according to Claim 26, further comprising means for associating at least one task definition with the personalization process definition so as to carry out the personalization process.

30. (Previously presented) A system according to Claim 20, wherein the means for associating at least one process definition with the instance of the card product definition comprises means for associating a hot list definition with the instance of the card product definition.

31. (Original) A system according to Claim 30, further comprising means for associating at least one task definition with the hot list process definition so as to carry out the hot list process.

32. (Previously presented) A system according to Claim 20, wherein the means for associating at least one process definition with the instance of the card product definition comprises means for associating an application load definition with the instance of the card product definition.

33. (Original) A system according to Claim 32, further comprising means for associating at least one task definition with the application load process definition so as to carry out the application process.

34. (Previously presented) A system according to Claim 20, further comprising:

means for associating an enterprise definition with the at least one process definition if the at least one process definition utilizes resources of an enterprise outside the domain of a smart card management server; and

means for associating a connection definition with the at least one process so as to define a mechanism for establishing a connection between the smart card management server and an enterprise associated with the enterprise definition associated with the at least one process definition.

35. (Currently Amended) A computer program product for managing a smart card product, comprising:

a computer readable media having computer readable program code embodied therein, the computer readable program code comprising:

computer readable program code which provides a plurality of generic definitions in a database, at least a portion of which have a predefined relationship to others of the generic definitions so as to provide a hierarchy of generic definitions;

computer readable program code which selects generic definitions from the plurality of generic definitions to associate the selected generic definitions with an instance of a card product definition, the instance of the card product definition defining characteristics of the smart card product; and

computer readable program code which populates the selected generic definitions with data associated with the smart card product so as to provide a hierarchy of instances of the generic definitions which define the characteristics of the smart card product;

computer readable program code which utilizes the hierarchy of instances of the generic definitions to manage the smart card product;

wherein the computer readable program code which provides a plurality of generic definition objects, computer readable program code which selects generic definition objects and computer readable program code which selectively links the selected generic definitions comprise:

computer readable program code which establishes the instance of a card product definition;

computer readable program code which associates at least one chip definition with the instance of the card product definition;

computer readable program code which associates at least one process definition with the instance of the card product definition;

computer readable program code which associates at least one task definition with the at least one process definition;

computer readable program code which associates at least one enterprise definition with the instance of the card product definition; and

computer readable program code which associates at least one application definition with the instance of the card product definition.

36. (Original) A computer program product according to Claim 35, further comprising computer readable program code which manages at least one of registration of card product holders, smart card product enablement, smart card product personalization, smart card product application data, smart card product hot lists and smart card product post-issuance application updates utilizing the hierarchy of instances of the generic definitions so as to provide the smart card product having the defined characteristics.

37. (Previously presented) A computer program product according to Claim 36, further comprising computer readable program code which selectively links at least two of the selected generic definitions to further define the hierarchy of instances of the generic definitions associated with the smart card product so as to further define the characteristics of the smart card product.

38. (Previously presented) A computer program product according to Claim 36, wherein the plurality of generic definitions include process definitions which define smart card management tasks which are configured to manage the attributes of the smart card product.

39. (Previously presented) A computer program product according to Claim 36, wherein the plurality of generic definitions include a platform definition, a card product holder definition, a device definition, a certificate definition or a key definition.

40. Cancelled.

41. (Previously presented) A computer program product according to Claim 35, wherein the computer readable program code which associates at least one process definition with the instance of the card product definition comprises computer readable program code which associates an enablement process definition, a registration

process definition and a personalization process definition with the card product definition.

42. (Original) A computer program product according to Claim 41, further comprising computer readable program code which associates at least one task definition with the enablement process definition so as to carry out the enablement process.

43. (Original) A computer program product according to Claim 41, further comprising computer readable program code which associates at least one task definition with the registration process definition so as to carry out the registration process.

44. (Original) A computer program product according to Claim 41, further comprising computer readable program code which associates at least one task definition with the personalization process definition so as to carry out the personalization process.

45. (Previously presented) A computer program product according to Claim 35, wherein the computer readable program code which associates at least one process definition with the instance of the card product definition comprises computer readable program code which associates a hot list definition with the instance of the card product definition.

46. (Original) A computer program product according to Claim 45, further comprising computer readable program code which associates at least one task definition with the hot list process definition so as to carry out the hot list process.

47. (Previously presented) A computer program product according to Claim 35, wherein the computer readable program code which associates at least one process definition with the instance of the card product definition comprises computer readable program code which associates an application load definition with the instance of the card product definition.

48. (Original) A computer program product according to Claim 47, further comprising computer readable program code which associates at least one task definition with the application load process definition so as to carry out the application process.

49. (Previously presented) A computer program product according to Claim 35, further comprising:

computer readable program code which associates an enterprise definition with the at least one process definition if the at least one process definition utilizes resources of an enterprise outside the domain of a smart card management server; and

computer readable program code which associates a connection definition with the at least one process so as to define a mechanism for establishing a connection between the smart card management server and an enterprise associated with the enterprise definition associated with the at least one process definition.

2. The following is an examiner's statement of reasons for allowance. The present invention is directed to a method for utilizing a hierarchy of instances of smart card definitions associated with a smart card product to manage the smart card product in different phases such as smart card production, smart card issuance, and post-issuance support services. More specifically, independent claims 1 and 16 are directed to a method and system for managing smart card products comprising utilizing smart card definitions, the smart card definitions comprises at least one chip definition, at least one process definition, at least one task definition, at least one enterprise definition and at least one application definition. The closest prior art, Tushie et al. (6,202,155) discloses a smart card personalization system with an object-oriented programming approach using a chip definition and at least one task definition. The prior art, taken either singly or in combination, fails to anticipate or fairly suggest the limitations of applicant's independent claim, in such a manner that a rejection under 35 U.S.C 102 or 103 would be proper. The claimed invention is therefore considered to be in condition for allowance as being novel and nonobvious over prior art

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Dinh whose telephone number is 571-272-3802. The examiner can normally be reached on Mon-Fri: 10:00am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Minh Dinh
Examiner
Art Unit 2132

MD
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